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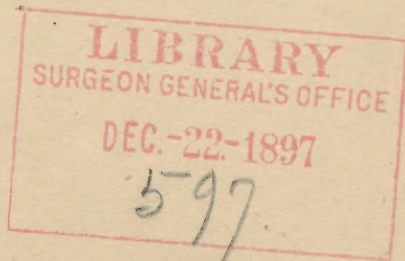
LITERARY METHODS IN MEDICINE.

A LECTURE DELIVERED BEFORE THE W. W. KEEN SURGICAL
SOCIETY OF THE JEFFERSON MEDICAL COLLEGE.

By W. W. KEEN, M.D., LL.D.,

Professor of the Principles of Surgery and of Clinical Surgery in the Jefferson
Medical College, Philadelphia, Pennsylvania.

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[REPRINTED FROM INTERNATIONAL CLINICS, VOL. I., SEVENTH SERIES.]



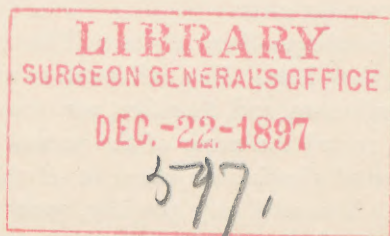
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GENTLEMEN,—My subject this evening is "Literary Methods in Medicine," and I have selected it for this reason: I well remember how I floundered around in my early medical career, and the many mistakes I made, until I finally evolved from my own experience, together with suggestions from friends with whom I talked on the matter, a method of my own. This method I shall describe to you, and, as it has been very satisfactory to myself, I think it may be of use to you. If you will look in the *Medical News* for August 12, 1893, you will see a similar very admirable paper by Dr. Bayard Holmes, of Chicago, who, so far as I know, has done the best work in this country with the view of urging students of medicine and doctors to follow out a reasonable, feasible, and practical method of making their knowledge available, first to themselves, and secondly to others.

I propose to speak to you on two topics,—first, "case-taking," and, second, the writing of papers, or "case-using." I would be very glad if you would make notes as we go along, as I think they will be useful to you hereafter.

I. *Case-taking*.—Some of you will become residents in the Jefferson and other hospitals. You will want to write up the history also of your private cases, and, therefore, you must know how to do it.

First, record the name of the person. If the patient is a child, always record the father's name, or, if the father be not living, the mother's. You will very possibly, years later, want to find out the after-history of the patient. A child may thus be reached through the parents. If you are dealing with a married woman, record her husband's name, as, if his name is in the directory, you will be able

to reach him, and through him the wife. Always record, also, the name of the family physician and his address, so that you may obtain later information from him. Next, note the residence, then the age, and then the occupation. The occupation has very often a great deal to do with disease. A recent case in the Jefferson Hospital, in which the cause of necrosis of a large part of the pubic bone was at the first glance inexplicable, is a good illustration. When I learned that the man worked in an iron foundry, and used an iron tool with a long handle, which he pushed forward by the pressure of his body, the cause became clear. This pressure was, of course, the cause of the necrosis.

I remember a good story told of a doctor who insisted that his patient did not take enough exercise, in spite of the man's protests that he did. Suddenly he asked the man's occupation. "Postman, sir," was the unexpected and embarrassing, though convincing, reply.

Next, note the height, and then the weight, so as to determine whether the person's weight is out of proportion to the height, and whether he is fat or thin. Get both the best weight and the present weight. If a year ago a man weighed one hundred and forty pounds and to-day one hundred pounds, there is some serious trouble, possibly cancer of some of the digestive organs or other part of the body. The weight will often put you on the track of the disorder. Inquire into and record the patient's habits as to eating and drinking, and especially over-indulgence in either, particularly as to alcohol, and often into the sexual habits and illicit indulgence.

Having recorded these preliminary observations, you must get the family history, to see whether heredity has had anything to do with the case. Inquire into the health of the patient's father and mother if living, or, if they are dead, what they died of; also what the grandparents, if dead, died of, as well as the cause of death of the uncles and aunts on both sides. Ask especially as to tuberculosis and cancer. In this way you may determine the question of heredity.

Having thus gotten the family history, we next come to the *personal history*. You will first inquire what prior illness or accident the patient has been subjected to. You will find very often that this is a very difficult task. You must have the shrewdness of a lawyer in cross-questioning your patient in order to determine the facts of the personal history. As an illustration of this I may mention the case of a little girl who was brought to my clinic at the Orthopædic Hospital a few weeks ago, to be treated for curvature of the spine. That was all I was told of her history. I asked for more data, and only to-day

her mother remembered that a year ago she was subject to very severe attacks of pain, especially in the right iliac fossa, and that she had had at that time, and at intervals of from four to six weeks since, a discharge of pus from the vagina. A discharge of pus from the vagina in a girl of seven was a fundamental fact which the mother had entirely neglected to tell me about. If in the previous history there is noted an accident, you will want to inquire particularly into the details of that accident. As an example of this, a man may tell you that he had a fall and injured his head. If you record this only, you have made a most imperfect record. You must know whether the man was struck severely enough to tear his scalp or fracture his skull; whether he was unconscious; if unconscious, when he came to himself, and whether he was able to get up and walk home, and what later symptoms were observed. All these details, you will observe, are very important for you to obtain in connection with the prior history before the present illness began. When you have to do with a woman, you will wish to know her personal history in relation to her sexual organs; when menstruation began and its character; when married; how many children; how many miscarriages; whether her labors were normal or instrumental; whether or not she nursed her children; whether or not she has had any trouble with her breasts or the pelvic organs. These facts may have a very important bearing on the history of your patient. In both sexes, but especially men, you must inquire as to syphilis, acquired or hereditary. Here your ingenuity and tact will often be taxed to the utmost to get at the truth. If the facts observed are in favor of a syphilitic history, you must disregard denials, but you will record both the denial and the facts. In married women you must often avoid the direct question, and reach the facts indirectly by inquiring as to the loss of hair, sore throat, sore eyes, blotches on the skin, etc. In all cases observe the teeth for evidences of inherited syphilis.

Then you come to the history of the *present illness*,—first, when it began, and, second, how it began; what took place at the beginning of the illness; and whether any new features have developed since; whether the conditions first existing became worse or better, and as to there having been relapses. Next you wish to ascertain and describe the present condition. Frequently you will find this written as “S. P.,” meaning *status præsens*, or the present condition of the patient. You will want to state whether the patient is apparently in good or ill health; whether he shows any evidence of long-continued illness; note anything that strikes you particularly as to the general appearance of your patient. Then begin to describe the present symptoms. You

will first state whether any pain exists anywhere ; any tenderness, any swelling, or other evidence of a tumor. When you have described the present general condition and symptoms, you will wish to ascertain the local conditions and the physical examination, as, for instance, of a tumor of the breast ; in which quadrant of the breast it exists ; if the nipple is retracted ; and let me say here that if it is not retracted, do not let this fact pass without comment. It is important to state negatives as well as positives, not only as to this, but many other conditions. State if there is any discharge from the nipple when you squeeze the breast. If there is a lump, you must describe the size. Do not say it is as big as an apple, or of the size of a cherry. You may say it is of the shape of a cherry if you choose, but you would better say it is globular. State the diameter, whether it be one inch or two inches. You feel the tumor, and state whether it is hard, elastic, lobulated, and whether it is ulcerated. In that way you give to the reader of your paper some idea of what you find. If it is possible, always give the circumference as well as the diameter. In the case of a goitre or other tumor, give not only the transverse and the vertical measurements, but also the circumference from one side to the other, and that the girth of the neck was so many inches. If possible, I would use the French method of centimetres, as this is much better than the English method of inches.

You will wish to preserve any photographs, drawings, or sketches that you may have secured in connection with the case. These various charts that I show you are very good for this purpose. These are some "clinical charts" I devised many years ago, and can be had from P. Blakiston, Son & Company in pads. These are stencil charts in use at the Orthopædic Hospital. In the case of tumors, draw an outline of them, and state such things as that the right side was dull or tympanic, etc. I cannot too strongly urge that you should make a careful, thorough physical examination in every case. Some time ago I quickly discovered that a gentleman had a cancer of the rectum. He had suffered for a year with tenesmus, pain, difficult defecation, and blood in the stools. Although you will scarcely believe me, for two years the man had suffered in this way, and yet his physician had never once passed his finger into the rectum. If he had done so he would have instantly ascertained that the man had a cancer. Another example was that of a gentleman who complained very much of similar symptoms and of the small diameter of the stools, they being no larger than the little finger. No examination of the abdomen had been made. On examination of the left iliac fossa I found a lump there

about two inches in diameter, which proved to be a cancer of the colon, and accounted for the condition present.

Now that you have the history, what will you do with it? Let me tell you my own method. Different surgeons and physicians pursue many different methods, more or less good. My own method is one that has been evolved from a good deal of experience, and has served not only myself but many of my friends. Either write out your cases on sheets of paper,—and I think the best kind is the legal cap,—or, if you have the luxury, dictate them to a stenographer. File them alphabetically. I have in these two files my cases from January 1, 1895, to January 1, 1896. Usually I use two of these in a year, the first containing the names from A to L, the second from M to Z. They are called the “Shannon binding cases,” and may be obtained of any stationer. The notes of each case can be removed from the file in a moment without disturbing the others. With the notes I file photographs, sketches, or diagrams of the case. Unmounted photographs are better for filing than the mounted. When an operation is done, write up its description at once, so as not to forget the details. From time to time you will add the later notes of each case to complete the later history till the case is terminated. When the history is terminated I file also the temperature chart.

When you have taken these, it may be, elaborate notes and filed them, you want to make this mass of notes available. You must, therefore, index them. First index every case by *name*, and secondly by *disease or operation*. A double catalogue is therefore indispensable. The Library Bureau, 146 Franklin Street, Boston, supplies every necessary appliance for large and small libraries, including cards of a uniform size, but varying thicknesses. (I always use a medium weight.) Neat cases, holding two, four, six, or more drawers, in which the cards fit exactly, with taller cards on which the alphabetical divisions are written and project a little above the other cards, are placed at convenient spaces, to enable one readily to find the desired card. By all means get these inexpensive cards at once. The case holding the cards you can get later, when your patients are more numerous and your purses better filled. Simple envelope-boxes will answer very well for the first few years. Here are two drawers from my own card catalogue of my cases. In the first are the names of all the patients whose histories I have from A to L. In another those from M to Z.

They are indexed under A, B, C, etc., and are then subdivided by the first vowel in the name. Bates would be under Ba, Bloodgood under Bo, and so on. If I wish, for example, to find the history of

Harry Fell, I turn to "Fell, Harry," and find his case recorded as "right-sided neurectomy of posterior cervical nerves, 1894;" then I go to my case files for 1894, turn to F, and find his complete history. To-day a patient came into my office and reported his later history after a neurectomy of the second and the third divisions of the fifth nerve, and I quickly found the notes of his case, and at once added this information to the history in order to bring it up to date.

But you not only want your cases indexed by names, but by diseases and operations. I have, therefore, two other drawers with cards on which are indexed all my cases, classified by the disease or the operation, in the one drawer from A to L and the other from M to Z, and subclassified by the first vowel of each disease or operation. In indexing the cases on this set of cards I will often index the same case under two or three or sometimes even more headings. Thus an aneurism of the popliteal, for which I ligated the femoral, would be indexed under "Artery, popliteal, aneurism of, Smith, John F., 1895," —i.e., in the file for 1895; "Artery, femoral, ligation of, for popliteal aneurism," and "Aneurism, popliteal, ligation of femoral artery." If I remove some enlarged tubercular glands of the neck, and was obliged in the course of the operation to ligate the jugular vein, I would index it under "Neck, glands of, extirpation of, with ligation of jugular, Peter Jones, 1891," and also under "Vein, jugular, ligation of, during removal of tubercular glands, Peter Jones, 1891." If the thoracic duct were injured during the operation, I would add another reference under "Thoracic duct, injury of, during extirpation of tubercular glands, Peter Jones, 1891." In a moment, by turning to my files for 1895 or 1891, I could find the histories of Smith, John F., or Jones, Peter.

If I want to write a paper supplementing that of Samuel W. Gross on ligation of large veins, I can quickly find all the data I possess under "vein," whether it be the "jugular," "axillary" "femoral," or any other. Each of these large veins would have its own card.

Of course this method means a good deal of labor and takes a great deal of time. It pays, however, and you always have your knowledge available. You can put your hands right on it, and it will pay you a great deal better than to trust to a faulty memory. Inevitably you will forget a great many cases. Even if you remember them, you will forget the salient points you would have noted at the time.

Suppose you do not follow such a system, what will you have to do? With far greater labor and far more imperfect results, you must hunt through the indexes of various journals and books for what you

want. Only those who have undertaken such labor know what patience, diligence, and pains are required to attain what you wish.

Let me beg of you to begin this or some other system at once. The moment you graduate begin taking notes of your cases. From lack of such a system a large number of cases that occurred in my earlier experience have been wholly lost. I did not write the details down at the time.

First, therefore, take your notes carefully ; second, file them away ; third, index them by name ; and, fourth, index them by disease or operation in the way I have mentioned.

II. Now, how will you use them? This brings us to the second point.

Case-using.—You can refer to your own cases very readily. But you will want to know in writing any particular paper what other surgeons have said about the subject, for there have been wise men before you. You must know what experience they have had, what disasters they have met with, and how they have overcome them, for they will act as warnings and encouragements to you. You will find many brilliant ideas new to you that were known fifty years ago. Unless you look up what has been written by your predecessors in books and medical journals you will often be brought to shame and grief.

What facilities, then, are there in the way of books? The large medical libraries of the country are practically found in only five cities. First and foremost, not only in this country, but in the world, is the library of the Surgeon-General's Office in Washington. Begun during the war, it has now grown to be by far the most important medical library in the world, and it is made splendidly available to the entire profession. At any time that I wish a book not in this city I can get it from Washington by a very simple process. I go to the librarian of the College of Physicians and give him a list of the books I need. He writes to Washington for them, and they are sent not to me, but to the library of the college. I can go there and spend all the time that I want in reading them over. The surgeon-general's library is free to the entire profession throughout the country. This liberal and most laudable arrangement was inaugurated by Dr. John S. Billings. All I have to do is to pay the expressage on the books both ways ; there is no fee for the use of the books. Secondly, we have here in this city at the College of Physicians the next most important library. It is a magnificent library, larger than any other medical library in the world, excepting that of the Surgeon-General's Office. In the Penn-

sylvania Hospital in this city we have also a very valuable library as far as it goes, although it is not as large as that of the college.

If you are in or near New York, you can use two large libraries there,—that of the New York Hospital, and, still more important, the library of the Academy of Medicine.

In Boston you can use the library of the Boston Medical Library Association, which is one of the most valuable in this country. In Chicago you can consult the books of the Newberry Library. There are in a great many of the minor medical centres small local libraries, as, for instance, in Cleveland, where there has recently been started by a number of energetic doctors the beginning of a very excellent library. I hope one of the first things you will do will be to join with your brother physicians in starting a good local library. All of these large libraries have card catalogues such as those I have described.

Supposing now that you have not access to any large public library; what will you do? First, you will want to buy the best books for your own library. Even if you are not interested in any special department, but are general practitioners, as I presume most of you will be, there are books in many special departments which you will always want to buy for your library in addition to such as treat of medicine, surgery, gynaecology, etc., in general. Some of you who can afford it will do this readily, others less quickly. Every one of you will, I hope, found somewhat of a library. The man who has ten books is only one-half as good as he who has twenty,—and has read them.

Next, with regard to medical journals. If you read Bancroft's history of the United States, and after that McMaster's, you would have some knowledge of the history of the country, but you observe that your history would date back to when the book was written. So in text-books. The author cannot issue a new edition every year. They must come out at certain intervals of two to five years. Meantime, what are you going to do? There is constant progress going on, and you must keep up with it. You keep up with the civic affairs by reading the newspapers, and the newspaper is to a national history what the medical journal is to medical books. I have brought quite a number of journals in order to say a word to you in reference to them. First, take your local journal. Never mind where you are, always take the journal in your own neighborhood. Very likely this may be a small journal, and will not give you all the information you need, so you must take some others. Let me point out to you a few of the various journals which I take. Of course I speak only of surgery and

no other department. We will take the American journals first. Here is the *Annals of Surgery*, of which two volumes are issued annually. In this you get original papers and a very admirable review of the surgical work of the world. I get as much out of this as any other surgical journal I see. I have here the oldest medical journal in the world, the *American Journal of the Medical Sciences*, published monthly in this city. This is volume cxii., which terminated on December 31. Like the *Annals of Surgery*, this consists of original papers, reviews of books, and finally a *résumé* of the more important recent medical papers. Here is another journal published in New York, the *Medical News*, of which I have here a single weekly number and a bound volume. In this there are original papers, proceedings of medical societies, selections from other journals, etc. This is a copy of the *New York Medical Record*, a weekly, and this is one of the bound volumes for six months of the year. This is the *New York Medical Journal*. These are two excellent journals, both of the same type as the *Medical News*. A number of other excellent American journals, such as the *Boston Medical and Surgical Journal*, the *International Medical Magazine*, the *Journal of the American Medical Association*, the *Medical and Surgical Reporter*, etc., I see regularly in a small "journal club." Here are two English periodicals. This is the old one that so many of you are familiar with, the *Lancet*. It is a rather curious commentary that the name is that of an instrument now so rarely used. This is the *British Medical Journal*, and these two are the best journals published in Great Britain, not only for surgery, but for medicine, obstetrics, gynæcology, the ear, the eye, and, in fact, every department of medicine. They are universal journals in that respect.

I will now show you some of the Continental journals, and this leads me to urge you all, if possible, by all means to learn at least one other language than your mother tongue. When you have acquired another language you have doubled yourself. If you have an opportunity of studying only one, study German. This is the hardest language, perhaps, but it is certainly by far the most desirable at the present time in papers and books on the practice of medicine and surgery. Add French to German if at all possible, for there is much that is valuable in that language. Let me show you a few of the foreign journals which I take myself. Here are single numbers of the *Deutsche Zeitschrift für Chirurgie* and the *Beiträge zur klinischen Chirurgie*, and here are bound volumes of each. This is another one, founded by the great Langenbeck, the *Archiv für klinischen Chirurgie*, and here is one

of the volumes. This is a smaller weekly journal, the *Centralblatt für Chirurgie*, and has often one important paper at the beginning, while all the rest consists of free abstracts of the important surgical papers of the world. If you take only one German journal, that is the one I would advise you to take. It makes one large volume for each year. In the *Deutsche medicinische Wochenschrift*, the *Berliner klinische Wochenschrift*, the *Wiener medicinische Wochenschrift*, and the *Wiener Klinik* you will find many important contributions to medicine, surgery, obstetrics, etc.

In French literature you will find less of importance, although there is a good deal. I take these two journals, the *Revue de Chirurgie* and the *Archives provinciales de Chirurgie*.

When you first enter in practice you most probably will not be able to subscribe to so many journals, but you can read a number of them at small expense by forming a "Journal Club" of from half a dozen to a dozen neighboring doctors who will pay, say five or six dollars a year each. With this money you subscribe to as many journals as your money will buy and pass them from week to week around the club. The journals are sold to the highest bidder, and this will add to the receipts of the club.

Not only are these and many other journals of value, but you will find "year-books" in which are gathered all the more important papers of each year. I think the best one in this country is the *American Year-Book of Medicine and Surgery*. It is a large book, with a good many illustrations. This is the volume for last year. It consists of articles, criticisms, and suggestions. One who reads this carefully will keep well up in all departments of medicine. Every year there is published by Dr. Sajous of this city the *Universal Annual of the Medical Sciences*. It consists of five volumes each year, and I have brought one volume as a specimen. INTERNATIONAL CLINICS consists of four volumes a year of valuable clinical lectures in many departments, from which you will gain much.

I have spoken to you of books, of journals, and of year-books, but you cannot be expected to remember all of the articles you read. How are you going to make them useful? Just in the same way you make your cases useful. Have a second card catalogue for all such articles and books. I have brought one drawer of my own card catalogue along to show you how it is done. I saw, for example, the other day in the *Boston Medical and Surgical Journal*, by Higgins, a case of Kraske's operation for imperforate rectum. In the *Medical News* I soon came across a second one by Elliot, and the case I had the other day is the

third case. Immediately that I read the first two I catalogued them under "Rectum, imperforate," and as a subheading, "Kraske's operation for," giving the author, the journal, the volume, year, and page. I also catalogued them under "Kraske's operation," and as a subheading, "for imperforate rectum." If, then, I have such a case, I can in a moment refer to all the prior cases I have seen recorded, and thus learn the advantages, the disasters, the results of prior cases, and embody them in any paper I may wish to write, and in my daily work can avail myself of the experience, both favorable and unfavorable, of my predecessors, and if possible improve upon their methods. Sometimes I do not have time to read the articles at the moment, but I catalogue them. If I have occasion hereafter to refer to the topic, I can find the paper here and can immediately get access to it and read it. In this catalogue I follow the same plan that I do with my cases. If during a reported operation on the neck the internal jugular was divided, I would catalogue that under "vein, jugular," and also under "neck, glands of." In that way I not only catalogue the important papers but also the details. Murphy's button is a new appliance. When I treat a case of gastro-enterostomy or ileo-colostomy or intestinal anastomosis in which Murphy's button has been used, I would catalogue that under the disease and also under "Murphy's button." If successful, it is so recorded. If an accident happens and the button is retained, or sloughing follows, I refer to it in my catalogue. If I read John Hunter's Life and find a statement I want to refer to, I catalogue it under one, two, or three headings. In this catalogue of papers, and also in my own cases, I make cross-references, as, for example, cancer of the rectum is so closely allied to cancer of the sigmoid that I would refer under "rectum, cancer of, to "sigmoid, cancer of," and *vice versa*. In this way I can find all cases that are allied.

I should have referred also to certain encyclopædias, as, for example, Ashhurst's "International Encyclopædia of Surgery," in six volumes, Buck's "Reference Hand-Book of the Medical Sciences," in eight large volumes, and other similar works, of each of which I show you one volume. Specialties also have their encyclopædias, such as those on the eye, the ear, children's diseases, etc. You can always consult these with profit. In addition to these there are the Transactions of many societies, as, for example, of the American Surgical Association and the American Orthopædic Association, and so on with a multitude of associations. You should make all of these available by cataloguing in the way I have mentioned. For instance, "artery, popliteal, perforation of, by a splinter of bone in fracture," is catalogued under

"artery, popliteal, etc.," but also under "fracture of femur, perforation of popliteal by a splinter of bone," etc. You thus have not only the fracture of the femur but also the perforation of the artery both noted. Let me read another, "artery, renal, aneurism of, operation, recovery." Under aneurism I would have "aneurism, treatment of, by extirpation," or "aneurism, treatment of, by proximal ligature," and so on. Here is another under C, "cauda equina, lesions of." Then follow a number of papers on that subject as distinguished from the lesions of the spinal cord. These quotations from my own catalogue are sufficient to show you the method.

Each man knows his own needs, his own tastes, his own practice best. Two such catalogues, one for his own cases and one for journal articles, books, etc., all bearing on the branch of practice he has selected or on all, if he is a general practitioner, will well equip him both as a practitioner and a writer.

But these catalogues cover only a small portion of the literature of the world. If you wish to consult this, you must do so by larger catalogues than a personal one.

I have here one volume of the "Index Catalogue" of the magnificent library that I have spoken of, that of the Surgeon-General of the United States Army,—an entirely unique literary production of which we as Americans may well be proud. How many medical journals do you suppose there are in the world? Dr. Robert Fletcher has recently stated it at nearly eleven hundred, and every article in all these journals as well as all medical books published in all languages are found in this splendid catalogue. It is in sixteen large quarto volumes and covers every subject that can possibly be connected with medicine. The literature of some subjects will cover over one hundred pages. In such extensive subjects it is subdivided into works and articles bearing on the anatomy, pathology, etiology, symptoms, complications, treatment, etc., and if the treatment is very extensive in its bibliography, it is again subdivided very minutely.

We have also another important current index called the "Index Medicus," edited by Dr. Billings and Dr. Fletcher. Vol. xix., which I show you, is the last, and refers to all the publications in the world of the year. The value of such an index is simply incalculable.

Now, suppose you are going to write a paper, and you have the material from the notes of your own cases (from your first card catalogue), and have read all you need to in the books and journal articles (from your second card catalogue), and have supplemented these by reading the articles or books of importance which you have found re-

corded in the "Index Catalogue" or the "Index Medicus," how will you go about writing your paper?

First comes the title of the paper or case, and I would advise you to take pains to select a good title. Never use such a title as "Two Interesting Surgical Cases," or "An Unusual Surgical Case," etc. These papers will go in the "Index Medicus" under precisely the title you give, and the title mentioned gives no clue to the nature of the cases you report. Suppose I am hunting up cases of operation for perforation of the intestine in typhoid fever, how can I know that the papers just named refer to just the class of cases I am seeking for? The fact is that such papers are probably never read. State what you are writing about clearly and tersely; if it be a case, give it a good descriptive name; and if there were any unusual complications deserving attention or any novel procedure employed, state it in the title. When you want to write your paper and have your title and material, I would suggest that you first take the etiology; next the pathology (often these two are comparatively intertwined); third, the symptoms of the case; fourth, the physical signs; fifth, the diagnosis; sixth, the differential diagnosis; seventh, the prognosis; and, eighth, the treatment. This plan gives a logical method to your paper. It is often well, also, at the end of a paper to make a summary of your conclusions, so that there may be crystallized out of your paper the principal conclusions that you have been led to. Always try to express yourself clearly. Never try to use fine language; write plainly and simply so that anybody may understand it. When I see a paper written by a man whose former papers have been marked by clearness and good sense, I always read it. You soon learn to "size up" the writers of papers and books.

It has been a great pleasure to me, gentlemen, to meet you this evening. I hope I have opened your eyes to the vast fields of medical bibliography in which you may roam at will; have shown you the means, the methods, and the great labor which your teachers and the writers of the books you study and often admire are compelled to undertake and find delight in; have exhibited to you the methods by which you can make your own work and your own reading valuable, because it is properly recorded and then made available by proper indexing; and, above all, have stimulated you to do the best work in your power and to add to your at first scanty knowledge, to the end that you may grow better, wiser, and abler men and make that larger knowledge available for the relief of human suffering and the prolongation of human life.

